

ABSTRACT OF THE DISCLOSURE

The invention provides a simple metallic film manufacturing method for manufacturing an arrayed waveguide grating able to set each light transmitting central wavelength to a set wavelength at optionally predetermined temperature (for example 25°C). The arrayed waveguide grating is manufactured by using this method. The light transmitting central wavelength of a circuit forming a waveguide forming area on a substrate is measured, and a shift of the light transmitting central wavelength from the set wavelength is corrected by annealing process. A mask has a hole approximately formed in the same shape as the manufactured metallic film, and is arranged such that the hole of the mask corresponds to a manufacturing portion of the metallic film. The metallic film is manufactured by evaporation, etc. A intersecting planes is formed by primary cutting, and a position shifting member is fixed through the metallic film and solder, and a non-intersecting planes is formed by secondary cutting so that the waveguide forming area is cut and separated.